



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,976	02/15/2002	Xiangxin Bi	2950.18US02	1411

7590

12/11/2002

Patterson, Thuente, Skaar & Christensen, P.A.
4800 IDS Center
80 South 8th Street
Minneapolis, MN 55402-2100

EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 12/11/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,976

Applicant(s)

BI et al

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Claims 18-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiederhoft et al (US 5,840,111) as set forth in the last office action and further discussed below.

It is argued that the Wiederhoft reference does not teach rutile titanium dioxide citing other references as support for this argument. Wiederhoft clearly states that the nanodisperse titanium dioxide comprises rutile structure having particle size of 1 to 100 nm. See col. 1, lines 8-12. To accept applicants' assertion is equivalent to invalidating the Wiederhoft reference based on a false disclosure. It's not within the Examiner's authority to do so.

With regard to the newly added limitation, i.e. particle size distribution of the titanium dioxide, Wiederhoft also discloses titanium oxide particles having particle size distribution within the range as claimed. See Figure 2.

2. Applicant's arguments have been fully considered but they are not persuasive for the reasons set forth above.

New Grounds of Rejections - 35 USC § 102/103

3. Claims 18-21 and 23-28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Montino et al (US 4,803,064) or Colombo et al (US 3,661,522),

Claims 18-21 and 23-25: Both Montino and Colombo references disclose particles comprising rutile titanium dioxide having a uniform particle size distribution. See col. Montino, col. 2, lines 5-26; and Colombo, col. 2, lines 52-66 and col. 3, lines 3-10.

Because the particle size distribution is uniform, it is necessarily inherent that the particle size distribution of titanium dioxide as taught in these two references falls within the ranges of the claimed particle size distribution as recited in instant claims 18-21 and 23-25. In the alternative, it would have been obvious for one having ordinary skill in the art to select particles within the claimed range by simple mechanical process such as sieving or filtering. Applicants have not disclosed that the specific particle size distribution serves any particular purposes or solves any particular problems.

Claims 26-28: Colombo and Montino both suggest the use of such titanium dioxide as pigment or catalyst. See Montino, col. 1, lines 23-24; Colombo, col. 1, lines 5-8.

4. Claims 18-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bruno (US 5,776,239).

Claims 18-25 and 28-30: Bruno discloses titanium dioxide particles comprising rutile titanium dioxide having particle size from 1-100 nm or from 4-60 nm and a uniform particle size distribution. See col. 2, lines 25-29 and col. 3, lines 5-9. Because the particle size distribution is uniform, it is necessarily inherent that the particle size distribution of titanium dioxide as taught in these two references falls within the ranges of the claimed particle size distribution as recited in instant claims. In the alternative, it would have been obvious for one having ordinary skill in the art to select particles within the claimed range by simple mechanical process such as sieving or filtering. Applicants have not disclosed that the specific particle size distribution serves any particular purposes or solves any particular problems.

Claims 26-30: Bruno suggests the use of titanium dioxide particles in cosmetic composition, coating composition or ceramic powder. See col. 3, lines 36-67.

5. Claims 18-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over (a) Siegel et al (US 5,320,800), (b) Hansenne et al (US 5,772,987), (c) Okuda et al (US 5,837,050), or (d) Pratsinis et al (US 6,254,940).

The Siegel, Hansenne, Okuda and Pratsinis references both disclose particles comprising rutile titanium dioxide having the particle size as claimed. See Siegel, col. 4, lines 28-33 and col. 5, lines 42-56; Hansenne, col. 3, lines 19-30; Okuda, abstract and col. 2, lines 60-64; and Pratsinis, col. 1, lines 44-48. No particle size distribution is reported in the references; however, it would have been obvious for one having ordinary skill in the art to select particles within the claimed range by simple mechanical process such as sieving or filtering. Applicants have not disclosed that the specific particle size distribution serves any particular purposes or solves any particular problems.

6. Applicant's arguments with respect to claims 18-30 have been considered but are moot in view of the new ground(s) of rejection set forth above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

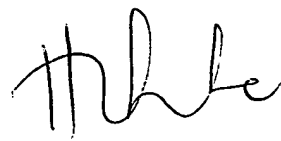
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

Application No. 10/076,976
Art Unit 1773

period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 703-308-2415. The examiner can normally be reached on 10:00 a.m. to 8:30 p.m., Mondays to Friday.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9610 for regular communications and After Final communications.



H. T. Le
Primary Examiner
Art Unit 1773

hl
December 5, 2002